THE TRUTH ABOUT NCP LISTED BIOREMEDIATION AGENT [TYPE EA] OSE II

Over its 23 year history, the Oil Spill Eater International (OSEI) Corporation and its product Oil Spill Eater II (OSE II) has been the target of a disinformation campaign spreading false information and 'science' (*) designed to mischaracterize the product throughout the oil spill response community and member agencies (federal and state).

This document has been created to clarify what OSE II is and how it works, and what it is **NOT.**

WHY CLEAN UP AN OIL SPILL?

The reason you clean up an oil spill or hazardous materials is to reduce the toxicity of these spilled materials so single celled organisms can survive. If these organisms can survive then the entire food chain can survive, and the environment will sustain life.

DIFFERENCES BETWEEN OSE II AND OTHER 'BIOREMEDIATION' PRODUCTS

BIOREMEDIATION is defined as the <u>use of microorganism metabolism to</u> <u>remove pollutants.</u>

One of the broad concerns with bioremediation products is that many contain foreign microbiological cultures and/or nutrients that catalyze a microorganism's population-growth rate. Most countries do not allow foreign bacteria to be introduced into their eco systems due to unpredictable interactions and side effects that may be detrimental to maintaining the delicate balance in these environments. Just as the frogs that were brought over from Hawaii to Australia, the frogs being foreign or

non indigenous, have taken over indigenous (local to that region) species, and are causing great problems in Australia.

Hence, bioremediation has ended up with a scary bio-monster connotation associated with it as creating organisms that could potentially alter and adversely affect the natural biodiversity when introduced into marine environments and coastal areas.

The frogs in Australia are a good example of why a country should guard against the intrusion of non-indigenous species so future problems can be prevented.

OSE II is a very different bioremediation process than what is generally defined and understood in the industry.

WHAT OSE II IS NOT

- OSE II is <u>NOT</u> a Bio-augmentation Process
- OSE II is **NOT** a Fertilizer
- OSE II does **NOT** introduce <u>non-indigenous microbial strains</u>
- OSE II does **NOT** contain genetically modified microbes
- OSE II does NOT release ORC Compounds
- OSE II is NOT employed using "soaps" as a <u>Surface Washing</u> <u>Agent</u>
- OSE II is NOT a <u>Dispersant</u> but is a better and less costly solution than Corexit or other toxic dispersants
- OSE II is **NOT** a "finishing up" product.

OSE II IS a non-toxic <u>first response</u> solution (only response necessary) to oil spills on land, water, sea, subsea, marshes, beaches, and estuarine environments.

OSE II is NOT an untried, untested product.

OSE II has cleaned up over 18,000 oil spills over the past quarter century and can provide substantial documentation of formal testing by the EPA, DOI, LSU, and numerous independent and well-respected research facilities proving its effectiveness

- OSE II creates no bad side effects or "trade offs".
- OSE II contains no toxic surfactants.
- OSE II rapidly eliminates the adhesion properties and toxicity in the oil <u>cancelling out the need for dispersants and their tradeoffs</u> <u>all together</u> which have as one of their primary purposes to protect birds and other wildlife from being coated with oil and reducing shore damage.
- OSE II does not cause oil to sink into the sediment. It causes
 the oil to rise to the surface. However, even though it causes it
 to float, it breaks it down so rapidly that it is very difficult to see
 until it is completely gone within a matter of a few days to a few
 weeks depending on the amount of oil spilled.
- OSE II is a viable alternative for Absorbents

3 TYPES OF BIOREMEDIATION CLARIFIED

With the fundamental reasons for cleaning up a spill being to reduce the toxicity so that living organisms can survive, it does not make sense to take a living organism and apply them to an oil spill or hazardous material, (foreign or indigenous bacteria) unless you can detoxify the hazardous chemicals at the same time.

It is important to differentiate the three types of bioremediation processes. The first type of product is a bioremediation process that utilizes bacteria or non-indigenous (foreign) bacteria. The problem with these types of products is they introduce species or imbalances that could cause future problems which may not become apparent for some time. The second type are those that contain nutrients or fertilizers to support the microorganisms present in the spill environment and the third is enzyme based, acting to support mother nature's natural processes.

The Bioremediation Product Types listed on NCP List appear as follows:

Biological Additive: 1. Microbiological Culture
2. Nutrient Additive
3. Enzyme Additive

Out of the 108 oil spill response products which are EPA listed (and of that, 25 are Bioremediation agents), only **ONE** is classified as **Biological Enzyme Additive** (EA) based – Oil Spill Eater II (OSE II).

The EPA NCP Product Schedule communicates this in their summary page as follows:

"Currently Listed Products by Category:

Dispersants 18
Surface Washing Agents 51
Surface Collecting Agents 0
Bioremediation Agents 25
Biological Additives (18)
Microbiological Cultures (17)
Enzyme Additives (1)----[OSE II]
Nutrient Additives (7)

Miscellaneous Oil Spill Control Agents <u>14</u> Solidifiers (9)

Total 108"

Unless proper assessments and protocols are developed for each type of Bioremediation Agent as to their suitability in different open water, marine and other environments, the term and functional diversity of Bioremediation products will continue to be mis-understood and mischaracterized by regulators and decision makers up and down the multi agency chains of command and spill response management structures. This has and will continue to act as a barrier to legitimate use and more importantly continue the deadly course of ineffective response and deny relief to every living organism and creature exposed to industrial toxins in our world.

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Through the Freedom of Information Act, OSEI Corporation obtained documents that clearly show EPA Officials communicating false information about OSE II during the BP Oil Spill discouraging its use despite requests from the Coast Guard and other stakeholders while enforcing and favoring the use of Exxon invented toxic product Corexit. Several million gallons of Corexit were applied to the BP Oil Spill adversely affecting human health and threatening the entire eco system.